

To:	Arlington Redevelopment Board	Date:	December 1, 2016
From:	Sam Offei-Addo, PE, PTOE Joanna Kavaliris, PE, PTOE	Proj. No.	28346.00
Re:	Response to Comments by Arlington Transportation Advisory Committee (TAC) 19R Park Avenue - Transportation Impact Report		

BSC Group prepared a Traffic Impact Study, dated November 2016, to evaluate the potential traffic impacts for a proposed 38-unit residential development to be located at 19R Park Avenue in Arlington, Massachusetts. The Town of Arlington Transportation Advisory Committee (TAC), in a letter dated November 21, 2016, provided comments based on their review of the TIS. This memorandum has been prepared to respond to the transportation-related comments put forth by the TAC. The comments and responses are presented below.

Comment:

The TAC suggests that the title of the report be changed to "Transportation Impact Report".

Response:

This has been done. All future references to the report in these responses will refer to the Transportation Impact Report (TIR).

Comment:

The Traffic Impact Study deals only with the impact of the project on area roadways. The Town of Arlington should require developers to submit full transportation studies for their projects, which document not only traffic impacts but also accommodations for transit use, bicycles, pedestrians and ridesharing. Provisions for these latter modes of transportation can serve to reduce vehicular impacts on roadways from proposed development.

Response:

This has been noted. Responses to comments below further evaluate the non-vehicular modes of travel.

Comment:

The Traffic Study follows generally accepted methodology for analyzing impacts on area roadways. It may actually overstate the volume of traffic generated by the proposed development because it does not take credit for likely non-vehicular use that could be expected because of the project's location near bus service and adjacent to the Minuteman Bikeway. Although the expected vehicle trip distribution for the project appears reasonable, the report should document the source.

Response:

The report has been revised to account for a portion of the non-vehicular modes of travel, which are expected to be in the range of 30 percent, based on collected census data for the Town of Arlington. Table 1 below, taken from the revised TIR, summarizes the calculated reduction in vehicle trips.

Table 1: Trip Generation Summary

	Weekday Morning Peak Hour (vehicle-trips)			Weekday Afternoon Peak Hour (vehicle-trips)			Weekday Daily Trips
	<u>Enter</u>	<u>Exit</u>	<u>Total</u>	<u>Enter</u>	<u>Exit</u>	<u>Total</u>	<u>Total</u>
<i>Estimated trips for 38 Apartment Units*</i>	4	18	22	25	14	39	354
<i>30 percent non-vehicular trips</i>	1	5	6	8	4	12	106
<i>Resulting vehicle-trips</i>	3	13	16	17	10	27	248
<i>*based on ITE LUC 220 – Apartments</i>							

Table 1 shows that, assuming 30 percent of tenants will not drive, the expected number of vehicle trips will be 16 during the weekday morning peak hour (3 entering, 13 exiting), 27 trips during the weekday afternoon peak hour (17 entering, 10 exiting), and 248 trips during a typical weekday. However, as noted in the TIR, it is expected that the actual number of vehicle trips to/from the site will be even less than shown in Table 1, due to the proposed Transportation Demand Management (TDM) Plan and the proposed site improvements.

As noted in the revised TIR, the trip distribution patterns were assigned based on the existing travel patterns through Downing Square. The patterns were developed assuming that the majority of trips will be towards Route 2 and Summer Street in the morning.

Comment:

The analysis of the operation of the proposed driveway on Lowell Street does not appear to take into account current and projected queuing on the eastbound Lowell Street approach to Downing Square. Currently during peak periods, queues often extend past the project driveway, which is about 65 feet west of the stop bar at the intersection. As a result, vehicles exiting the project driveway and westbound vehicles from Downing Square turning left into the driveway could be blocked. The latter could cause queuing on Lowell Street possibly back into Downing Square. The study should examine the engineering feasibility and traffic impacts of providing a driveway onto Park Avenue as either an alternative or as an addition to the proposed Lowell Street driveway. One-way as well as a two-way operation should be considered.

Response:

BSC agrees that the queues on Lowell Street may extend beyond the driveway. As shown in Table 1, the expected highest vehicle trips to/from the site are calculated as approximately one vehicle every five (5) minutes during the weekday morning peak hour and one vehicle every four (4) minutes during the weekday afternoon peak hour.

The eastbound approach on Lowell Street is under stop-control and it is expected that as vehicles slow down to approach the intersection, drivers entering and exiting the site will be able to make the necessary turning maneuvers. It is expected that vehicles slowing or stopped in the eastbound direction will allow gaps for the westbound left-turning drivers entering the site or for drivers exiting the site.

In order to aid these turning maneuvers, BSC recommends installing a “Do Not Block Driveway” sign in the eastbound direction on Lowell Street in order to ensure gaps for turning maneuvers into and out of the Project driveway.

After construction of the site, engineers can visit the site to observe vehicle operations. If vehicles are, in fact, having trouble finding gaps in the traffic, then BSC recommends restricting left-turns into and out of the site driveway during certain times of day where these movements are problematic (likely morning and afternoon peak hours).

The site plan and roadway network have been reviewed in order to consider providing a second Project driveway along Park Avenue, however BSC does not believe this to be a feasible option for the following reasons. Vehicles traveling northbound on Park Avenue have the right-of-way as they approach Downing Square and this is the only movement in

the intersection that is not under stop-control. If a site driveway was constructed along Park Avenue, vehicles would have to stop on Park Avenue northbound while waiting for a gap to turn left into the driveway; this may pose a safety issue as drivers traveling through northbound on Park Avenue would not be expecting a stopped condition. Additionally, drivers exiting a potential site driveway may have trouble finding a gap in southbound Park Avenue traffic, as those drivers traveling southbound would have just traveled through Downing Square and be less prepared to heed to conflicting vehicles turning in either direction.

Comment:

The HCA and Arlington Department of Planning and Community Development are in negotiations to develop a Transportation Demand Management (TDM) plan for the project. The TDM plan will encourage the use of transit, bicycle, pedestrian and ridesharing modes as alternatives to single occupancy vehicle use. The transportation study should document the final TDM plan.

Response:

The proposed TDM plan has been summarized in the TIR and included in the Appendix to the TIR.

Comment:

The study states there will be 27 parking spaces and the site plan has a note stating there are 23 spaces but the site plan only shows 20 marked spaces. The number of parking spaces should be clarified. Since there is limited on street parking near the site, the planned number of spaces should be shown to be sufficient for resident and visitor demand.

Response:

The TIR has been revised to accurately reflect the number of proposed parking spaces.

Comment:

The study should document the location of bus stops near the site and the number of routes and frequency of service for those stops. This should include Lexpress Bus as well as MBTA service.

Response:

The TIR has been updated to document the existing transit service within the Project vicinity.

Comment:

The site plan indicates outdoor parking for 22 bicycles and the draft TDM plan indicates there will be indoor bike parking. The site plan also indicates the provision of a connection to the Minuteman Bikeway, including a bridge over the small stream next to the Bikeway. The transportation study should document all planned accommodations to support bicycle use.

Response:

The TIR has been updated to document the proposed bicycle accommodations.

Comment:

The connection to the Minuteman Bikeway could also be used by pedestrians who could access Park Avenue via the existing stairway from the Bikeway or the path between the Bikeway and the Gold's Gym parking lot. This would provide a more direct connection to the bus stops and businesses on Massachusetts Avenue than using the proposed driveway to Lowell Street. The study should document these pedestrian accommodations as well as any on-site sidewalk along the driveway to Lowell Street.

Response:

The TIR has been updated to document the proposed pedestrian accommodations.